بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

KING SAUD UNIVERSITY

FACULTY OF APPLIED COMPUTER SCIENCES
COURSE: INTR TO NET.
TIME: 6*0* MIN

جامعة املك سعود

كلية علوم الحاسب التطبيقي

2019-2020

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Name: ....   *ID:*............................

Section:...............................

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Quiz#3 (spring 2020)

Question one: Two applications (***download manager, facebook***) are running on a station. They are connected through two TCP sessions to two distant stations (Britain, USA). Each TCP session is given an ISN (5000, 8000). Two messages of lengths (4.5 KB, 9.75 KB) are sent through the two TCP sessions.

Hence perform the following activities:

    a. Draw a schematic diagram for the two TCP sessions.
    b. Show how the message of each session is segmented.
    c. If the scheduler take two frames from each session, show the flow of frames on the wire

N.B: Assume MSS is equal to 2 KB

Question two: An application on station A was activated to send a 13 KB to station B. The transmission time t_t and the propagation time t_p are equal to 2 µs and 5 µs respectively. For normal operation, assume that:

- Maximum segment size is 1 KB, window size is 5.
- Station B delays acknowledgments until it receives four consecutive segments.
- Use a delayed ack timer of 20 µs.

Hence perform the following activities:

    a. Calculate the time needed to transfer the file? Validate your answer.